CANADIAN BOREAL COMMUNITY FIRESMART PROJECT

2013 OPERATIONS PLAN

May 2013

Prepared in Consultation With:

ENR South Slave Region
Fort Providence Resource Management Board
FP Innovations
ENR FMB Science Section

Northwest Territories Environment and Natural Resources

Prepared by:

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Cover Photo Credit Larry Nixon

TABLE OF CONTENTS

Maps/Figures

GENERAL PROVISIONS

TITLE

This plan is entitled *Canadian Boreal Community FireSmart Project: 2013 Operations Plan* is hereafter referred to as the "Operations Plan".

REFERENCE TO OTHER PLANS

The Canadian Boreal Community FireSmart Project 5-Year Plan, hereafter referred to as the "5-Year Plan", sets out the overall objectives, methodologies and expected results of the Canadian Boreal Community FireSmart Project. The Canadian Boreal Community FireSmart Project will hereafter be referred to as the "Project".

The Operations Plan is a component of the 5-Year Plan for the Project.

LAND USE PERMIT (MV20092X0005)

The activities outlined in the 5-Year Plan for the Project will be conducted under the terms and conditions of the two year extension of Land Use Permit # MV20092X0005 issued by the Mackenzie Valley Land and Water Board.

Issue date: March 12 2009
Expiry date: April 29 2014

PERMIT TO BURN

The Project Manager will obtain a *Permit to Burn* from the ENR South Slave Region Manager of Forests prior to conducting the experimental prescribed burns or disposing of slash resulting from cutting fireguards or any other purpose.

MANUALS & OPERATING PROCEDURES

The overall management of the Project will be done in compliance with the operations manuals and procedures established by the Forest Management Division, specifically,

- 2013 Air Crew Briefing Manual
- Forest Management Division Fire Operations Manual
- 2009 GNWT Ignition SOP

DESCRIPTION OF THE PROJECT SITE

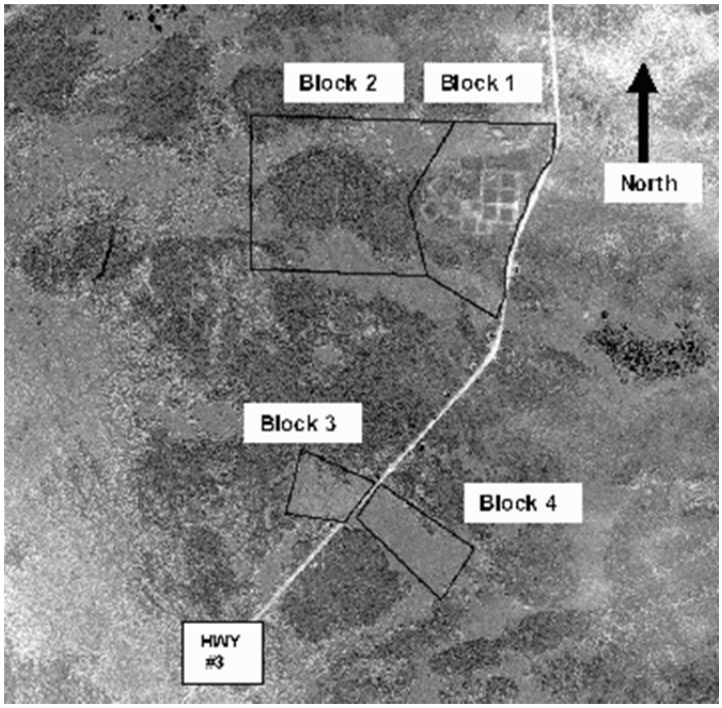
LOCATION

The Project site is located west off highway #3 (kilometre 70.6) approximately 40 kilometres north east of Fort Providence.

The Project site is located entirely on National Topographic map sheet 85-F-11.

The Project consists of 4 blocks. Activities planned for 2013 will take place primarily on Blocks 1 and 2 with a small sampling exercise on plot 3 & 4. The maximum and minimum latitudes and longitudes are as follows:

Blocks 1 and 2 (combined unit)		**Block 3**		**Block 4**	
Minimum latitude **61° 34.233'**	Maximum latitude **61° 35.5'**	Minimum latitude **61° 32.883'**	Maximum latitude **61° 33.35'**	Minimum latitude **61° 32.4'**	Maximum latitude **61° 35.15'**
Minimum longitude **-117° 8.383'**	Maximum longitude **-117° 12.517'**	Minimum longitude **-117° 10.667'**	Maximum longitude **-117° 11.867'**	Minimum longitude **-117° 09.3'**	Maximum longitude **-117° 10.917'**



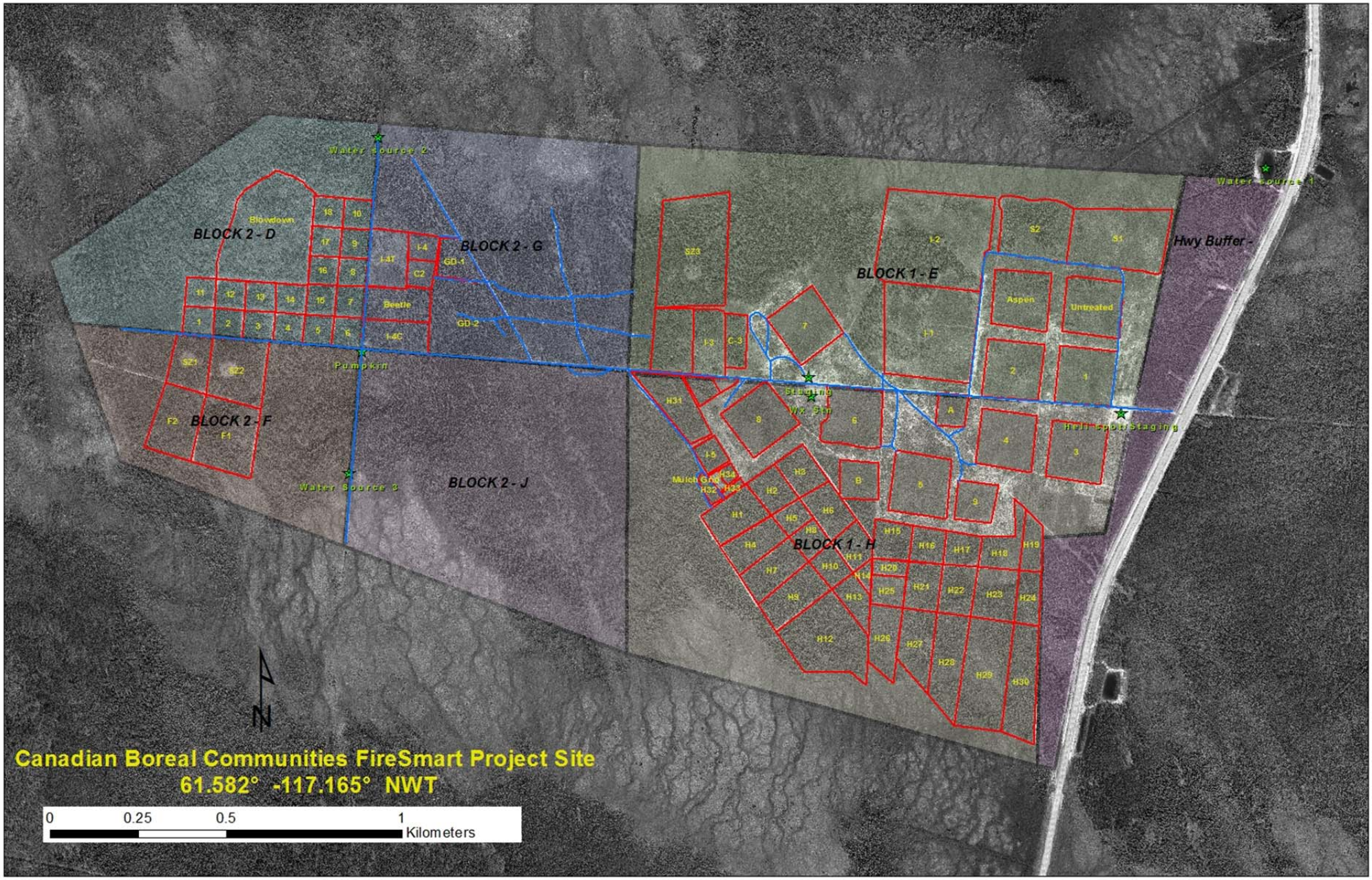
MAP 1 PROJECT SITE

IKONOS Satellite Image July 22, 2001

Map 1 shows the location of:
Block 1 (Old ICFME site)
Block 2 (FireSmart plots)
Block 3 (shrub fuel type)
Block 4 (shrub fuel type).

The bog birch in Block 2 will serve as a fuelbreak on the north, west, and south sides of the pine forest. The "developed" area in Block 1 (regenerating fireguards and burned plots) will be used as a fuelbreak on the west side of Block 2.

MAP 2 CBCFS (Block 1&2) Plot Layout



Values at Risk Analysis

As of 05/13

The Forest Management Division maintains a values-at-risk database, which is used in fire management operations to spatially display the location of potential values-at-risk relative to forest fire occurrences. In operation, when a fire is reported, all values-at-risk within a radius of 20 kilometres are identified and displayed. The same methodology was followed to produce the risk analysis map shown on the next page. Eleven (11) values-at-risk were identified.

A review of the maps in May 2013 found no significant changes.

Two of note are:

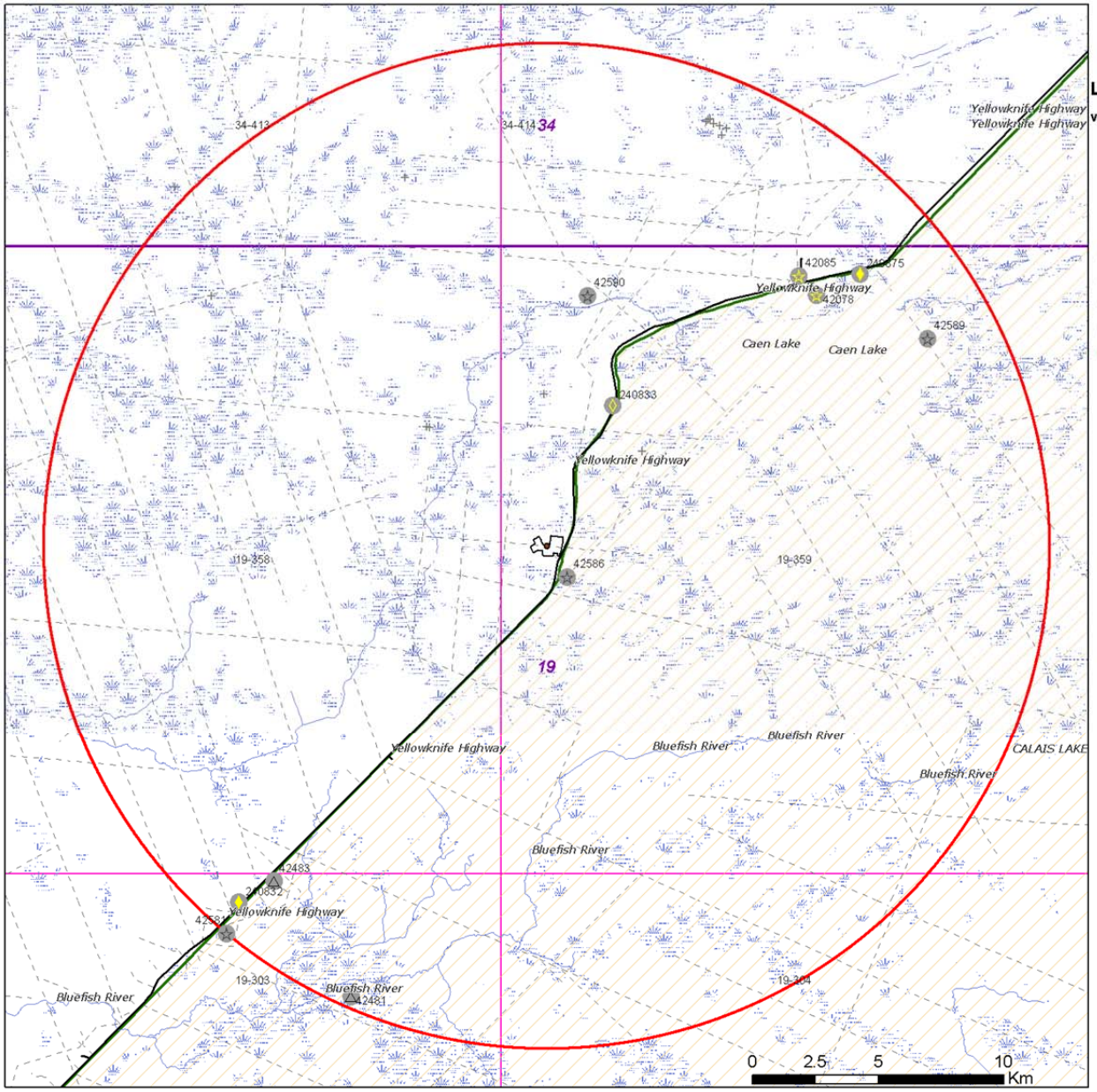
Northwestel Microwave Site

The microwave site is located 20 kilometres northeast of the Project site on the west side of Hwy #3. It consists of a large steel tower and small building located in the center of a clearing, which has minimal flammable vegetation to carry fire. The facility is accessible by vehicle off highway #3.

Caen Lake Fire Tower

The fire tower is located 20 kilometres northeast of the Project site on the east side of Hwy #3. It has a 30m steel tower, wooden cabin and small wooden out buildings located in the centre of a large clearing. As of 2011 the clearing has minimal flammable vegetation to carry fire, although the site is inactive and this may change over time.

The access road was deactivated in 2011 and the facility is **not** accessible by vehicle off highway #3.



Providence VAR Overview 2011

1:160,000

Legend

var_legend
- Natural Resource
- Cultural Resource
- Non-Private Habitable Structure
- Private habitable Structurte
- Infrustructure
- Solid = Occupied
- Hollow = Not Occupied
- Yellow = Verified
- Black = Not Verified
- Red = Hazardous

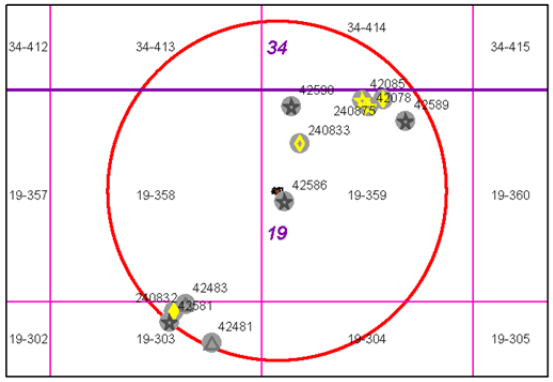
- Prov_20km_buffer
- providence_CFTE_site
- Community
- Rocks & Hazards
- Placenames
- Roads
- Cutlines
- Railway
- Contours (x50m)
- Rivers & Streams

- Wildlife/Migatory Bird Sanctuary
- National/Territorial Parks
- Special Agreement Area
- Sand
- Wetlands
- Lakes
- 100km_grid
- 25km_grid

N

Created By: Vera Green
Created On: May 31, 2011
Requested By: Larry Nixon

VAR_TITLE
[42078] Caen Lake ENR Fire Lookout Tower & Fuel Cache
[42085] Caen Lake/Dixon Microwave tower on Highway #3
[42481] MOOSE PRAIRIE
[42483] Bluefish Prairie
[42581] IOE Providence A-47
[42586] IOE Providence K-45
[42589] GDP Noel Mills Lake B-41
[42590] GDP Noel Mills Lake L-41
[240832] Unknown Owner Cabin on Highway #3
[240833] Unknown Owner Cabin Ruins on Highway #3
[240875] Unknown Owner Cabin on Highway #3



MAP 3 VAR Overview

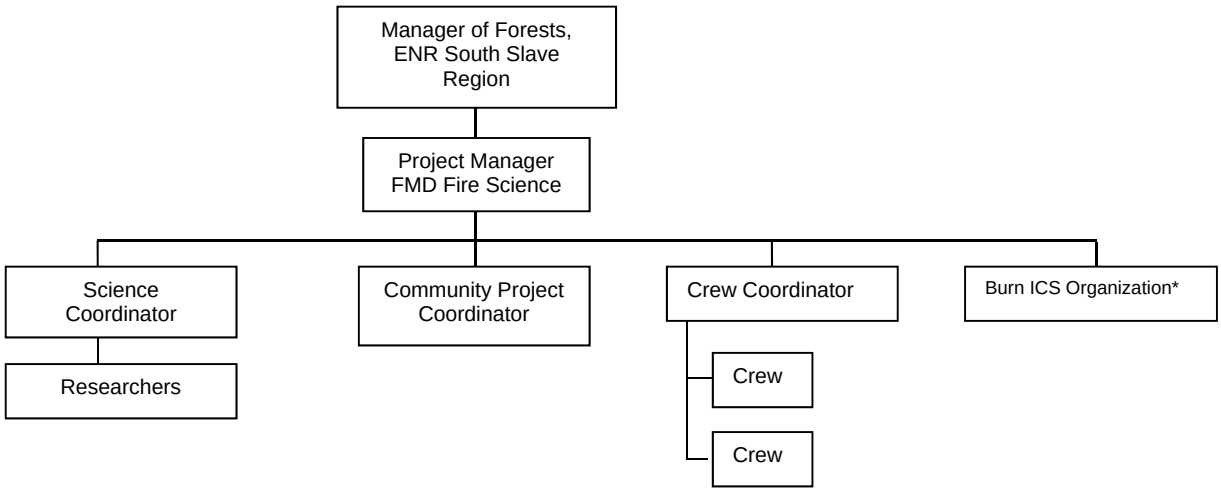
PROJECT MANAGEMENT

The South Slave Region will manage the overall project within the context of regional fire management operations. The Project Manager will manage the day-to-day operations, in collaboration with South Slave Region, the Fort Providence Resource Management Board and FP Innovations (or any other researchers onsite). The Project Manager will be provided by FMD Fire Science.

Contacts

TITLE	NAME	PHONE
Manager of Forests, ENR South Slave Region	Daniel Allaire,	867-872-6425
Project Manager, Forest Management Division	Larry Nixon,	867-872-7700
Fort Providence Resource Management Board	Priscilla A. Canadien,	867- 699-7009
FP Innovations	Ray Ault,	780-817-1840

Project Organization Chart



*see pg. 20

Duties and Responsibilities

The duties and responsibilities given below apply to the positions identified in the Project organization chart. These positions are specific to the Project and may not correspond to positions found within the organization of the Forest Management Division or the South Slave Region.

Manager of Forests, South Slave Region

The Manager of Forests, South Slave Region, (or Designate) is responsible for the overall management of the Project and coordinates the operational requirements of the Project with other Regional activities by:

- Assigning and scheduling crews to carry out work assignments
- Acquiring aircraft and other resources
- Providing support services from the Fort Providence Base
- Operating a fire management organization responsive to planned experimental prescribed burns or slash burning

Project Manager (assigned by FMB Fire Sciences)

The Project Manager is responsible for the operational management of the Project and the coordination of scientific studies with other activities including school projects, Elders' projects and training by:

- Developing and maintaining the Project site in accordance with the terms and conditions of the Land Use Permit
- Preparing and implementing the Operations Plan
- Preparing and delivering reports and oral briefings
- Providing logistical support to the scientific studies, school projects, and Elders' projects
- Preparing daily work plans for fireguard construction, slash burning, experimental prescribed burns, and other activities.

Crew Coordinator (assigned by South Slave Manager of Forests)

The Crew Coordinator is responsible for the supervision of one or more crews assigned to carry out daily work assignments given by the Project Manager, such as:

- Installing water delivery system
- Constructing fireguards
- Piling and burning slash
- Extinguishing fires resulting from slash burning or experimental prescribed burning.

Community Projects Coordinator (assigned by Project manager)

The Community Projects Coordinator is responsible for coordinating the projects planned by the Deh Gah School and the Traditional Knowledge team and assisting the Science Coordinator with data collection and other activities. A person will be assigned from the Fort Providence Base by the South Slave Manager of Forests to act in this capacity as and when required.

Science Coordinator (assigned by Project manager)

The Science Coordinator manages the scientific studies to ensure that the objectives of the experimental burns are met while at the same time providing opportunity for concurrent, non-conflicting research by:

- Coordinating proposals developed by third party "agencies" with planned experimental prescribed burns
- Co-developing daily work plans with the Project Manager
- Reporting information about the experimental prescribed burns to the Project Manager

Burn Operations

When conducting burn operations, the Project Manager will set up a separate Burn ICS Organisation. (See section titled *Burn Plan*)

COLLABORATIVE AGREEMENTS

A collaborative agreement will be negotiated between the Director, FMD and the Fort Providence Resource Management Board. The Director of FMD will provide a training opportunity for two young adults at the Project site under the CRA with FPInnovations to accomplish the objectives of this agreement.

PROJECT COMMUNICATIONS PLAN

Objective

The objective of the communications plan is to ensure that information about the Project is communicated to the appropriate people, in an acceptable format, in a timely manner by the most effective means commencing (usually) the second week of June to the end of the field season.

Community Consultation

Community consultation will be coordinated through the Renewable Resources Officer posted at Fort Providence.

The community will be kept informed about the daily activities of the Project by including the Fort Providence Resource Management Board and the Hamlet of Fort Providence on the list of recipients of the Daily Report.

Daily Reports

The Project Manager (or delegate) will prepare and send a Daily Report either electronically or by facsimile to Duty Officers and principal collaborators before 10:00.

Territorial Duty Officer	(867) 872-2077
Duty Officer, South Slave Region	(867) 872-4250
Duty Officer, Hay River	(867) 874-3749
Duty Officer, Fort Providence	(867) 699-3031
Hamlet of Fort Providence	(867) 699-3210
Fort Providence Resource Management Board	(867) 699-3133

The Daily Report will include, but not be limited to, the following topics:

- Cover page with table of contents
- Distribution list (fax):
- On -Site contact info (names, radio, sat phone etc.)
- Summary of activities for previous day
- Weather observations and FWI System values from the on-site weather station from previous day
- Forecasted weather for today
- Planned Activities/Requirements for today
    - Option 1
    - Option 2
    - Resource requirements
- Proposed activities/requirements for Tomorrow
    - General description
    - Resource requirements
- General comments
- Attachments (burn plans, spot forecasts etc.)

Briefings

Oral briefings will be prepared and delivered to convey specific information about planned activities to selected audiences.

Internet

Info will be posted to NWTFIRE.COM

Highway Signs

Highway signs will not be required.

Media

The Project Manager will brief the ENR Manager of Public Affairs and Communications on the Project by end of May each year and as required afterwards.

An ENR communication officer will notify the media about the Project prior to June 14. Media will be invited to visit the site, however all arrangements must go through the ENR Manager of Public Affairs and Communications office

SITE DEVELOPMENT / USE

The site will see three main areas of activity: Development, Research & Burn operations

These activities may take place separately or concurrently with each other. Any activities must be authorised by the Project Manager and the South Slave Manager of Forests.

The items in this section pertain to any activities conducted on the site. For specifics related to burns, see section titled *BURN PLAN*

Land Use Permit

All activities will be conducted under the terms and conditions of the two year extension of Land Use Permit # MV20092X0005 issued by the Mackenzie Valley Land and Water Board. The Project Manager will brief all personnel involved in the terms and conditions contained in the Land Use Permit prior to their first work assignment.

The Project Manager will carry and post at the site at all times during the land use operation, a copy of the Land Use Permit.

Petroleum Product Management

The caching of petroleum products on the Project site will be restricted to gasoline for a generator, mixed gasoline for the fire pumps, saws, and mixed diesel for the handheld drip torches (less than 410 L total).

The caching of petroleum products on the Project site for the purpose given above will be restricted to the period of operation, between June 18 and August 31. Otherwise, all petroleum products will be removed from the site.

Also see section titled: *FUEL SPILL CONTAINMENT & CLEAN UP CONTINGENCY PLAN*

Small Fuel Cache

If a small fuel cache is required (410 – 4000 L), the Project Manager shall provide, within 30 days after its establishment, written notice to the Mackenzie Valley Land and Water Board the location, amount and type of fuel, the size of the containers used, and the method of storage and the proposed date of removal of the cache.

Methods of Fuel Transfer

Fire pumps will be “re-fuelled” by hooking up a fuel line from the fuel tank (20-L container) to the pump using a quick connect fitting or fuel supply adapter. In essence, there is no actual transfer of fuel.

Chainsaws, brushsaws, and the generator will be re-fuelled by pouring fuel from a small nozzle-equipped container into the fuel tank.

Excavations

There will be no unapproved excavations on the Project site.

Watercourse Crossings

There will be no watercourse crossings on the Project site.

Clearing Of Lines, Trails, or Right-Of-Way

No roads will be constructed on the Project site. Existing cut lines will be used to access the experimental prescribed burn plots. A cut line which transverses Blocks 1 and 2 (see Map 2) will be used to access the plots in these two blocks. The cut line provides adequate access without grading provided that vehicle traffic is restricted following rainfall events.

Fireguards will be created by hand or mechanical means, but will only involve the removal of vegetation and creation of a fireguard between plots.

The fireguards will be used to access the burn plots within each of the blocks.

Monuments

The Project Manager shall report immediately to the Surveyor General (Yellowknife 867-766-8520) in the case where a boundary monument is damaged, destroyed, moved or altered.

The Project Manager shall report immediately to the Dominion Geodesist in the case where a topographic or geodetic monument is damaged, destroyed or altered.

Historical & Archaeological Sites and Burial Grounds

The Prince of Wales Northern Heritage Centre searched the NWT Archaeological Sites Data Base and reported (December 12, 2001) that there were no archaeological sites within the boundaries of Blocks 1, 2, 3, or 4 of the Project.

The Project Manager shall immediately suspend operations and report to the Territorial Archaeologist (867-873-7688) and the Mackenzie Valley Land and Water Board at (867) 669-0506 in the event a suspected historical or archaeological site or burial ground is discovered.

Camp/Staging Areas

There will be no camp established on the project site. Temporary camping may be allowed if approved by the Project Manager. Commercial accommodation in Fort Providence is preferred.

A main staging area will be located in Block 1 near Plot 7 (see *Map 2 CBCFS (Block 1&2) Plot Layout*).

Helicopter Staging will be in the clearing by the entrance from Hwy 3 (see *Map 2 CBCFS (Block 1&2) Plot Layout*).

Temporary staging areas may be established for operational needs by the Project Manager.

Garbage

Garbage resulting from use of the day camp area or any other activity will be removed daily and will be deposited in the landfill site in Fort Providence.

Sewage (Sanitary and Gray Water)

Portable lavatories (out houses) will be established on the Project site. The waste pits will be buried at the conclusion of each field season.

Wash water, resulting from clean up before lunch at the day camp area, will be poured into a pit and covered with earth.

Mechanized Equipment

The following is a listing of the number and type of equipment approved for the development of the Project site as per the Land Use Permit.

Table 1 Summary of the Type, Number, Size, and Purpose of Mechanized Equipment

Type & Number		Size	Proposed Use
5	Chainsaws	Various	Cutting trees on the fireguards in Block 2.
5	Brushsaws	Various	Cutting brush on the fireguards in Blocks 3 & 4
6	Fire Pumps	Mark 3 (or similar)	Controlling and suppressing fire following the burning of a plot.
1-2	Generator	Honda-type50 kg	Operating and re-charging electronic devices
1	Mulcher	<200hp	Redistribute vegetation debris, grind down stumps that reduce access and pose safety threats, improve access, create opportunities to investigate fire behaviour in mulched fuel.
1	Crawler Tractor	D-6H 20 tonnes	Grading hand-constructed fireguards in Plot 2 to facilitate the installation of the house-shells. Improving access and egress along selected areas of the cut line that transverses Block 1 & 2 including a designated parking area. Winter time plot preparation.
1	Front-end Loader with forks	Case 10 tonnes	Removing "green" firewood from the hand-constructed fireguards in Block 2. Assist with construction of survival zones and access to water sources for fire suppression purposes
1	Trailer-mounted Terratorch	Buckmaster Mark III (or similar)	Igniting experimental prescribed burn plots.
2-4	All-Terrain Vehicles	Various	Pulling the Terratorch unit Assisting fire crews with set up and delivery of suppression services
6	Crewcabs	2.8 tonnes	Transporting forestry work crews and researchers.
1	Mobile bandsaw	500 kg	Potential for on-site training to process wood removed from fuel management plots

End of season site clean up

At the end of the season's activities all research equipment will be removed by researchers prior to leaving. The crews from Fort Providence will make a final inspection and remove all garbage, remaining equipment and ensure the site is in good order.

ENR equipment return will be coordinated by the South Slave Manager of Forests.

Fuel Spill Containment & Clean Up Contingency Plan

Objective

The objective of the plan is to manage a fuel spill under the worst-case scenario.

Worst Case Scenario

The worst-case scenario is containing, cleaning up, and disposing a fuel spill of 205 litres.

Training

All personnel who will be handling petroleum products will be trained how to report a spill incidence and how to contain and clean up the spill and how to dispose any contaminated materials (see Training Plan).

Reporting Procedures

All spills will be reported immediately to the Project Manager (or delegate) by radio or in person. The Project Manager (or delegate) will immediately report the spill incident to the 24-hour Spill Report Line:

SPILL REPORTING:
(867) 920-8120

The Project Manager will also report the spill incident immediately to the ENR Renewable Resource Officer based in Fort Providence, in accordance with Standard Operating Procedures.

Spill Containment Kit

A spill containment kit consisting of absorbent materials, shovels, and a temporary storage drum will be maintained on the Project site.

Containment

Containment will consist of mopping up all liquids using absorbent material.

Clean-up

Contaminated soil will be dug up using shovels and placed in a drum for disposal.

Disposal

Disposal of absorbent material used to mop up liquids and any contaminated soil will be transported to the ENR base station in Fort Providence and temporarily stored there for ultimate disposal in a landfill that allows such disposal.

BURN OPERATIONS

Objective

The objective is to conduct all burns under a command system that has in place procedures that minimize safety risks and escaped fire. It must be realised that other priorities (active fires, heightened fire danger, crew reassignment etc.) may prevent any burns.

Burns will be conducted for:

- Slash/hazard reduction. These will usually be conducted outside the research trials. Depending on timing and size (e.g. burning off the bogs), they may require a separate *Permit to Burn* from South Slave Region
- Research purposes
- Test burns. Small test burns (< $3m^2$) will be carried out by trained personnel only. They are used to assess burning conditions and train personnel in fire behaviour

  Due to their small size and close supervision by trained personnel, these burns do not require plans or notifications. All will be carried out with suppression capability immediately available.

Briefings

South Slave Duty Officer

Before 09:00, the Project Manager will telephone the South Slave Region Duty Officer and give a briefing about planned burn activities. This communication also confirms the planned use of Strike Teams and the deployment of aircraft and any other matter, which pertains to the project.

The Daily Report (see *communications plan*) will also indicate that burning (slash or an experimental prescribed burn) is planned for the current day.

Fort Providence Base

The crews and Fort Providence Base personnel will receive a briefing on the day's activities by the Project Manager (or delegate) prior to 11:00.

Project Daily Briefing

A briefing will be held each day at 08:00 at the Snowshoe Inn. The briefing is primarily for the research scientists, overhead team, and support staff; however, anyone interested in the project may attend. The briefing will include, but not be limited to, the following topics:

- Planned activities for the day
- Fire weather (on days where experimental prescribed burns are planned)
- Safety
- Aircraft management and assignments

WX briefings

The Forest Management Division will provide the daily fire weather forecast and briefing through its contractor. These will be held daily at 1030 at the Ft Providence Base and relayed to the field.

Spot forecasts will be arranged for by the Project Manager as needed.

On-Site Briefings

On days that an experimental prescribed burn is planned, all personnel will receive a briefing at least one hour prior to the burn to ensure they understand the activities and their roles.

Crew Briefing

The crews will receive a briefing by the Project Manager (or delegate) each day. The briefing will include, but not be limited to:

- Activities for the day
- Fire weather
- Potential fire behaviour
- Work assignments
- Resource requirements
- Safety
- Aircraft
- Comms plan
- Org chart updates
- Site changes

Fire Weather Station

ENR Comms Techs will establish a fire weather station on Block 1 (see Map 2) early in the season (May-June) to monitor fuel moisture conditions using the Canadian Forest Fire Weather (FWI) System and to monitor wind conditions on burn days. The station will be removed each fall. Starting in 2013, the station will be connected into SPARCS.

Fireguards & Fuelbreaks

Fire breaks and fuel treatments will be established prior to conducting any research burn. They will be checked and confirmed by the IC (or delegate) prior to burn operations.

Water Supply System

A water supply system, consisting of pumps, hose, and portatanks, will be installed and tested prior to conducting any experimental prescribed burn or burning slash.

A borrow pit (water source 1) , located adjacent to Highway #3 (see Map 2), will be used as the source of water for the water supply system. Additional water sources (#2 & #3) are located at the north and south ends of the cut line in Block 2 (see Map 2). Water will be pumped to a series of portatanks located as required near the plot to be burned.

Air Tanker Support

The Territorial Duty Officer, on the advice of the Regional Duty Officer, will place the air tankers on appropriate alerts, based on the burn plan submitted by the Project Manager.

Notice to Airmen (NOTAM)

An automatic NOTAM is in effect once ignition takes place. If one is required at any other time, the South Slave Regional Duty Officer may establish one. The information provided below applies.

Site	Canadian Boreal Community FireSmart Project
Geographic location	Highway #3 at kilometre 70.6
Coordinates	61° 35' north by 117° 10' west
Time	1300 to 1900 or otherwise stated
Elevation	4000 feet above sea level
Radial distance	5 kilometres

Burn Operations Incident Command System

The experimental prescribed burns and slash burning will be conducted under an Incident Command System implemented by the Project Manager on burn days.

Prior to any burn, the Incident Commander &/or Project Manager will conduct training/briefing sessions to ensure that all aspects of the burn plan are clearly understood by personnel assigned to the Incident Command organization and that they understand their roles.

Incident Commander

The Incident Commander is responsible for the maintenance of the water delivery system, preparing a fire suppression plan on “burn” days, and supervising the fire operations.

Strike Team Leader

The Strike Team Leader is responsible for operating the water delivery system and the tactical deployment of other suppression equipment for use by the Strike Team(s).

Strike Teams

The Strike Team(s) will be composed of 5 person wildland fire crews and are responsible for controlling and extinguishing burns under the direction of the Strike Team Leader.

Ignition Supervisor

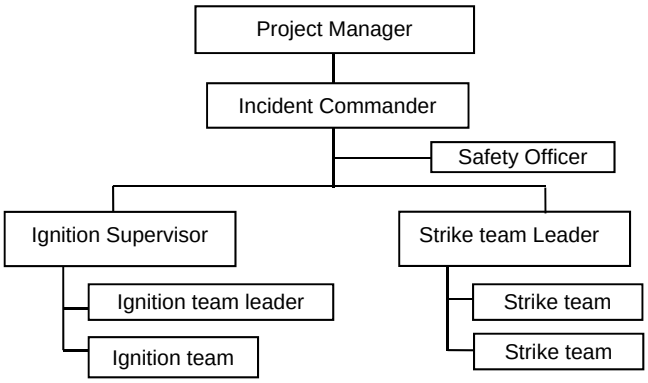
The Ignition Supervisor is responsible for selecting ignition devices, planning ignition patterns, monitoring wind and fuel moisture conditions prior to a burn and directing the Ignition Leader when to commence the ignition sequence.

Safety Officer

In addition to other assigned responsibilities, the Safety Officer, during an experimental prescribed burn operation, is responsible for:

- Conducting a pre-burn briefing to all personnel on the Project site
- Restricting access to and establishing safety zones around burns
- Stopping any activity that poses a threat to the safety and well-being of personnel working on the Project site
- Conducting the sequence of safety checks coordinated with the Ignition Leader and Incident Commander prior to the ignition of a burn plot

Burn Operations Organization Chart



Designated Work Areas

The burn site will be cordoned off by the Safety Officer and designated work areas where only authorized personnel are permitted. All other personnel and visitors on the Project site will be directed to specific locations while the burn is being conducted.

Count Down Procedures

The Incident Commander, Ignition Supervisor, and Safety Officer conduct the countdown procedures starting 30 minutes before the planned ignition time.

The Safety Officer has the authority to shut down the procedure at any time.

item	Go/No	Description	Time
1		Incident Commander telephones South Slave Regional Duty Officer **"30 minutes to Ignition"** Ignition Supervisor and Safety Officer sweep burn plot and confirm clear of all personnel	-00:60
2		Incident Commander directs R/W to start-up and begin positioning	-00:20
3		Ignition Supervisor advises Incident Commander to announce **"All Stations"** for activation of data collection instruments	-00:15
4		Science Team members complete activation of data collection instruments, clear burn plot area and report to Team Leader Team Leader confirms all clear for team members	-00:05
5		Safety Officer confirms burn plot is clear of personnel. "**Site all clear**" message transmitted to Incident Commander and confirmed.	-00:04
6		Incident Commander directs Ignition Supervisor to commence ignition sequence	-00:03
7		Ignition Supervisor confirms R/W in position and assesses Wx conditions to initiate ignition. Scrub ignition for instrument reset if 40 minutes past instrument activation	+00:40
8		Ignition Supervisor assesses Wx conditions to initiate ignition and announces "**All Stations Time X to Ignition**". Countdown begins	-00:01
9		Ignition Supervisor signals Ignition Team or terra-torch to commence ignition	00:00
10		Fire burns through plot. Ignition Supervisor directs R/W return to helipad	Variable
11		Incident Commander confirms R/W down and clear	Variable
12		Incident Commander advises "**All Stations: Fire Suppression Commencing**"	Variable
13		Safety Officer clears burn plot for research personnel	00:40+/-
14		Fire suppression completed. Incident Commander returns burn site and air space control to Project Manager	Variable

Fire suppression

Suppression will be undertaken by the Strike teams and not researchers unless requested. Sufficient Fire control equipment will be onsite to outfit all anticipated actions.

Escapes

Any escapes must be immediately reported to the South Slave Duty Officer at

867-872-6422(p) / 0541(c)

SAFETY PLAN

Objective

The objective is to minimize the risk of injury or death for all persons working on or visiting the Project site.

Safety Officer

The Project Manager will assign a person to the position of Safety Officer.

Safety Officer(s) will be assigned for the entire project. The Project Manager assumes the duties and responsibilities of the Safety Officer should one not be available...

The Safety Officer is responsible for administrating a safe work environment for all personnel and visitors to the Project site, specifically by:

- Receiving full and complete support from all personnel
- Preparing safety plans for specific activities
- Preparing and delivering briefings
- Establishing designated work areas
- Having full veto on any activity which they determine is unsafe.

Briefings

The Project Manager or delegate (usually the Safety Officer) will conduct a briefing to all personnel before they begin work on the site and whenever specific briefings are required.

Personal Protective Equipment

PPE will be worn by all staff. Visitors will be lent PPE as required.

Basic requirements:

- Nomex clothing
- Gloves
- Helmet with chin straps
- Boots (steel toes not required)
- Eye protection
- Personal First Aid kit

And as required:

- Hearing protectors
- Saw chaps
- Face screens
- Saw gloves

Minimum Training Requirements:

All participants in the burn operations will have, as a minimum, S100 (or equivalent) and Level 1 First aid.

Aircraft Safety Briefing

Prior to their first flight, all personnel involved with the project must participate in an aircraft safety briefing conducted by the pilot of each aircraft type.

Safety Audits

The Project Manager or Safety Officer will conduct safety audits from time to time.

Safety Issues

Any safety issues must be brought to the attention of the Project Manager/Safety Officer as soon as it is identified.

MEDICAL PLAN

SITE MEDICAL FACILITY			
MEDICAL AID STATIONS	**LOCATION**	**ATTENDANT (Y/N)**	**CONTACT**
Site 1st Aid Centre	Staging area	No	CH-5

SITE TRANSPORTATION			
VEHICLE	**LOCATION**	**ATTENDANT (Y/N)**	**CONTACT**
Crew Cab	Staging area	no	CH-5
Helicopter	Site Helispot (by entrance)	no	CH-5

AMBULANCE SERVICES			
NAME	**LOCATION**	**ATTENDANT (Y/N)**	**CONTACT**
	NONE		

HOSPITALS/HEALTH SERVICES							
LOCATION	**TRAVEL TIME (hours)**		**HELIPAD**		**BURN UNIT**		**CONTACT**
	GRND	**AIR**	**YES**	**NO**	**YES**	**NO**	
Fort Providence Nursing Station	1/2	1/4	**X**			**X**	**Via Ft Prov Base** CH6 or 867-699-3014/3029
Yellowknife Hospital	4	1:20	**X**			**X**	
Edmonton Royal Alexander	14	2:15	**X**		**X**		

Incident & Accident Reports

The Safety Officer or Project Manager will conduct an investigation of all incidents and accidents associated with activities of the project and prepare the appropriate reports, including a shell analysis and workman's compensation report.

ON SITE COMMUNICATIONS PLAN

The Project Manager will set up a communications network integrated with the South Slave Regional network to communicate information about conducting burns on the Project site. This will include having a satellite phone on site.

Radios

ENR will supply hand held radios

Radio Frequencies

The following radio frequencies have been assigned to the Project. Communication from the Project site to Fort Providence Base, if not relayed by radio, will be conducted using a Satellite Phone.

FUNCTION	CHANNEL	FREQUENCY	
		Transmit	Receive
Project site air-to-ground	5	153.470	153.470
Project site	5	153.470	153.470
Fort Providence Area Office	6	153.890	153.890
Caen Tower ***NOT operational***			
Air Attack		122.90	122.90
Air Attack		131.85	131.85
Air to Air		122.05	122.05
Air Advisory		126.70	126.70
Fort Providence Aerodrome		123.20	123.20

Sat Phones

Radio comms out of the site are marginal to poor. Sat phones will be available on site with the Project mgr. and FPInnovations. The Crew(s) will also have a sat phone if available.

Phone Numbers

(also see back cover)

Fort Providence Base..... 867-699-3014/3029

South Slave Duty Officer.....867-872-6422(p) / 0541(c)

Project Manager Sat Phone..... 8816-514-97949

FPInnovations Sat Phone....._____

Snowshoe Inn.....867-699-3511
Territorial Duty Officer.....867-872-7711/10
North Slave Duty Officer.....867-920-6115
Frank Channel Base.....867-371-3133(p) 5001(f)
FMD HQ.....867-872-7700

Appendix A - 2013 PROJECT WORKPLANS

To be supplied by research groups by March 2013

General outline

Name
Title *short and descriptive,*

LEAD *Name / Organisation / phone number*

CBCFS Block Plot *and /or other description of project area*

Objectives: *Brief description of what the project hopes to accomplish*.

Methods: *Description of how the project will be set up/ carried out*.

Co-operators: *agencies involved*

Deliverables: *Report? Article? What is going to come out of this project and an expected date?*

Burning conditions required: *Be as specific as possible*.

Site preparation: *Be as specific as possible*

Resources required for burning: *Be as specific as possible*

Map of plot treatment ---

Ignition plan Map north, light up actions, suppression set up, safety zones/escape routes.

Title: Structure Protection (to be revised)

Lead:	Ray Ault FPInnovations 780-817-1840
Plot ID:	Block 1G, plot I5
Objectives:	To run a crown fire into a community protection zone to understand how various treatments influence fire behaviour and structure survival.
Methods:	Crown fire will be created and run into the community protection zone.
Co-operator:	ESRD, U of Alberta, GNWT
Deliverable:	Final report with images
Burn Conditions:	FFMC >90; WS >15 km/h
Site Preparation:	TBD.
Resources:	hose; pumpkin; Dackermin torch & 20 gallons fuel; one crew
Plot Map:	see attached
Ignition Plan:	line ignition using Dackermin torch or multiple drip torches on upwind side of the plot.

Title: Fire Behaviour in 'Stand Cleaned' Pine stands.

Lead:	Greg Baxter FPInnovations 780-817-1840
Plot ID:	Block 1D, Plot C3 and a plot TBD
Objectives:	Document fire behaviour and identify differences between control and treated plots.
Methods:	Fire will be created in the control stand and the treated stand (cleaned) at the same time and fire behaviour compared.
Co-operator:	ESRD
Deliverable:	Final report with images
Burn Conditions:	FFMC >90; WS >15 km/h
Site Preparation:	Select and treat plot; burn plot
Resources:	hose; pumpkin; terra torch or 2 drip torch; 20 gallons Flash 21; one crew
Plot Map:	see attached
Ignition Plan:	Line ignition using Dackermin torch along the upwind edge of the control plot

Title: Survival Zones

Lead:	Greg Baxter FPInnovations 780-817-1840
Plot ID:	Block 2F, SZ2 and Block 2G, Plots GD2, Beetle & I4C
Objectives:	To run a crown fire into a 50 m diameter survival zone to determine if there are locations within the zone that are survivable.
Methods:	Crown fire will be created and run into the survival zone.
Co-operator:	ESRD, U of Alberta
Deliverable:	Final report with images
Burn Conditions:	FFMC >90; WS >15 km/h (east)
Site Preparation:	none required.
Resources:	hose; pumpkin; terra torch; 20 gallons Flash 21; one crew
Plot Map:	see attached
Ignition Plan:	Line ignition will be initiated along the upwind edge of the control plot using Dackermin torch

Title: Fire Behaviour in 'Under-burned' Pine stands.

Lead:	Greg Baxter FPInnovations 780-817-1840
Plot ID:	Block 2D, Plot 6,7 & 8.
Objectives:	Document fire behaviour and identify differences between control and under-burned stands. Re-burn under high indices. Run a crown fire into plot.
Methods:	Fire will be created in the control stand and the treated stand (Plot 6) at the same time and fire behaviour compared. Re-ignitions will also be performed in under-burned stands.
Co-operator:	ESRD, GNWT
Deliverable:	Final report with images
Burn Conditions:	FFMC >90; WS >10 km/h
Site Preparation:	Select and document stands.
Resources:	hose; pumpkin; terra torch or 2 drip torch; 20 gallons Flash 21; one crew
Plot Map:	see attached
Ignition Plan:	strip off surface fuels using line ignition along upwind edge of plot using hand torches.

Title: Ignition Device Evaluation

Lead:	Roy Campbell FPInnovations 780-817-1840
Plot ID:	TBD (evaluations conducted during ignition of other research projects)
Objectives:	Ignition device evaluation
Methods:	Information will be gathered in conjunction with research project testing.
Co-operator:	ESRD
Deliverables:	Evaluation process, report, video & pictures
Burn Conditions:	Project specific
Site Preparation:	Project specific
Resources:	Ignition team
Plot Map:	Project specific
Ignition Plan:	Project specific

Title: Wildland Fire Sprinkler Design

Lead:	Roy Campbell FPInnovations 780-817-1840
Plot ID:	TBD
Objectives:	"Fire Cobra" prototype testing
Methods:	Set sprinkler up and field test prototype for deficiencies and range (vertical and horizontal)
Co-operator:	ESRD
Deliverable:	Fire Cobra Testing; project note c/w video and images
Burn Conditions:	Project specific
Site Preparation:	Plug sprinkler into existing sprinkler set-up or suppression line
Resources:	Will work with crew to set up prototype
Plot Map:	Project specific
Ignition Plan:	Project specific

Title: Smoke Detection Training Video for Lookout (to be revised)

Lead:	Rex Hsieh	FPInnovations 780-817-1840
Plot ID:	All burns	
Objectives:	To test video recording protocol for the smoke detection training video	
Methods:	Record video from ground and lookout during any ignition	
Co-operator:	ESRD, GNWT	
Deliverable:	Raw video footages from ground and Caen Lake lookout	
Site Preparation:	Set up video camera at Caen Lake lookout before the burn	
Resource:	Key to the lookout, two cameras	

Title: Fire Behaviour in a Mulched Fuel Bed

Lead:	Steven Hvenegaard	FPInnovations 780-817-1840
Plot ID:	Block H1, Mulched area SW of staging area	
Objectives:	Document fire behaviour in a mulched bed	
Methods:	Line ignition will be initiated on the leading edge of an open plot (preferably 10 m X 10 m) of mulched fuel (jack pine). Observations of fire behaviour will be made with video, time-lapsed photography and in-fire video. Weather conditions will be recorded with a Kestrel and a RAWS. Mulch samples will be oven dried to determine fuel moisture content. If possible, these methods will be repeated in other plots with different age of mulched fuel or different degrees of shading.	
Co-operator:	GNWT, AB ESRD	
Deliverable:	Final report with images	
Burn Conditions:	FFMC >90; WS >15 km/h	
Site Preparation:	None anticipated; sites prepared in 2010; Wetting of plot perimeter may be considered as a precautionary measure.	
Resources:	Pump and hose; pumpkin; 2 drip torches; one crew; Dackermin torch	
Ignition Plan:	Line ignition will be initiated along the upwind edge of the mulched fuel bed using Dackermin torch or drip torch.	

Title: Effectiveness of wetting agents on fire behaviour in a mulched fuel bed

Lead:	Steven Hvenegaard FPInnovations 780-817-1840
Plot ID:	Block H1, Mulched area SW of staging area
Objectives:	Document changes in fire behaviour as a fire encounters a control line in a mulched fuel bed treated with different wetting agents
Methods:	A control line will be established on the downwind side of a mulched fuel plot (preferably 10 m X 10 m) of mulched fuel (jack pine). The control line (1m X 10m) will be treated in segments with different wetting agents (foam, water, and gel). There will also be a segment with no treatment (control). A drying period (time to be determined) will occur to compare longevity of the different treatments. Line ignition will be initiated on the leading edge of an open plot. Observations of fire behaviour will be made with video, time-lapsed photography and in-fire video. Weather conditions will be recorded with a Kestrel and a RAWS. Mulch samples will be oven dried to determine fuel moisture content. If possible, these methods will be repeated in other plots with a longer drying period.
Co-operator:	GNWT, AB ESRD
Deliverable:	Final report with images
Burn Conditions:	FFMC >90; WS >15 km/h
Site Preparation:	None anticipated; sites prepared in 2010; Wetting of plot perimeter may be considered as a precautionary measure.
Resources:	Pump and hose; pumpkin; 2 drip torches; one crew; Dackermin torch
Ignition Plan:	Line ignition will be initiated along the upwind edge of the mulched fuel bed using Dackermin torch or drip torch.

Title: Comparative fire behaviour in a mulched fuel bed vs. a closed forest stand

Lead:	Steven Hvenegaard FPInnovations 780-817-1840
Plot ID:	Mulched fuel beds (specific location to be determined)
Objectives:	Compare fire growth and other fire behaviour in a mulched fuel bed with that in a closed jack pine/black spruce forest stand.
Methods:	Establish a site where point source ignitions can be simultaneously observed in a mulched fuel bed and a closed forest stand. For each fuel type, set out duff consumption pins in a grid pattern (25 cm increments) starting at the intended location for point source ignition. Observations of fire behaviour will be made with video, time-lapsed photography and in-fire video. Weather conditions will be recorded with a Kestrel and a RAWS. Mulch samples and forest litter and duff will be oven dried to determine fuel moisture content.
Co-operator:	GNWT, AB ESRD
Deliverable:	Final report with images
Burn Conditions:	FFMC >90; WS >15 km/h
Site Preparation:	None anticipated; sites prepared in 2010; Wetting of plot perimeter may be considered as a precautionary measure.
Resources:	Pump and hose; pumpkin; one crew
Ignition Plan:	Matches will be used to initiate point source ignitions.

Title: Effectiveness of Mulching as a Fuel Treatment in Jack Pine/Black Spruce

Lead:	Steven Hvenegaard FPInnovations 780-817-1840
Plot ID:	BLOCK H1, Grid mulched area SW of staging area
Objectives:	Document the effect of mulching as a fuel reduction treatment in a jack pine/black spruce fuel type as crown fire approaches the treated plot
Methods:	Crown fire will be initiated in the control stand and run into the treated stand. Weather to be recorded using a handheld Kestrel and a RAWS. Observations will be recorded using handheld cameras, video cameras and in-fire cameras. If possible, fire behaviour will be filmed from helicopter. Rate of spread will be recorded in control plot and in fuel treatment.
Co-operator:	GNWT, AB ESRD
Deliverable:	Final report with images
Burn Conditions:	FFMC >90; WS >15 km/h
Site Preparation:	none required; site prepared in 2010.
Resources:	Pump and hose; pumpkin; one crew; helicopter with bucket
Ignition Plan:	Line ignition (pattern to be determined) will be initiated along the upwind edge of the control plot using the Dackermin torch.4

Title: Effectiveness of light stand thinning as a forest fuel treatment

Lead:	Colleen Mooney FPInnovations 780-817-1840
Plot ID:	Block 2D, plot GD2
Objectives:	Test the effect of 1m inter-crown spacing on a crown fire.
Methods:	Crown fire will be created in an un-treated (natural) stand and allowed to burn freely into the treated stand.
Co-operator:	ESRD
Deliverable:	Final report
Burn Conditions:	FFMC >90; BUI > 60; WS >15 km/h
Site Preparation:	none required; site prepared in 2012
Resources:	hose; pumpkin; terra torch; 20 gallons Flash 21; one crew
Plot Map:	see attached
Ignition Plan:	see attached

Title Pyrogenic Carbon Production (and consumption) From Forest Fires

Lead Prof. Stefan Doerr/Swansea University, Wales, UK/+447788716866; s.doerr@swan.ac.uk (Sat phone number to follow). Other staff: Dr Cristina Santin (Swansea University, c.s.nuno@swan.ac.uk)

Plot ID We hope to tag work onto any suitable plot that is to be burned. Our preference is for an untreated plot with a high fuel load, if possible higher than the plot we used in the 2012 campaign (SZ1), and burned at as high intensity as possible.

Objectives: To establish the pyrogenic carbon (PyC, black carbon; charcoal) production from a severe 'wildfire'. PyC can survive in soil and sediments for Millennia and can lead to net carbon sequestration provided full biomass recovery occurs over time after the fire. Previous work has missed important components of the PyC spectrum. We aim to link PyC production to fuel loads/characteristics and fire behaviour (T duration profiles). A secondary aim will be to determine the susceptibility of PyC present on the ground before the fire to consumption during a fire. The data will complement valuable data collected during the 2012 burn (SZ1).

Methods: Before the burn, a detail fuel inventory (loads and characteristics) will be carried out and a few fuel and samples will be taken. The site will be instrumented with 80-100 autologging thermocouples at different heights aboveground and also at different depths within the forest floor (and maybe mineral soil). The loggers are the size of a maker pen and need to be buried. Also, 20-40 small (5 x 5 cm) wire mesh bags containing charcoal of various sizes and individual pieces of charcoal will be placed on or within the forest floor to determine PyC loss during a burn. Mesh and logger locations will be marked with small metal rods.

Post-burn, mesh bags and loggers will be recovered and ash and charcoal samples (ca 100) will be taken at systematically along transects across the burns site from 15 x 15 cm sampling areas. Soil samples (0-5 cm depth) will be taken at selected locations in case mineral soil was affected by fire.

Estimates of charcoal present on standing and downed tress will also be made.

Samples will be processed (i.e. weighed and oven dried) and packed in Fort Providence. In 2012, we were very kindly given space in the local wildlife lab. We would be extremely grateful if this would be available again this time.

Samples will be analyzed in our UK lab for PyC content and characteristics. (We do have an import license for soil samples; ash and charcoal does not require a license.)

Co-operators: The proposal has been prepared in collaboration with Caroline Preston (NRCan, Pacific Forestry Centre), and Bill de Groot and Tim Lynham (NRCan, Great Lakes Forestry Centre, 1219 Queen Street East, Sault Ste. Marie, Ontario, P6A 2E5. Tel.: (705) 541-5538, Bill.deGroot@NRCan-RNCan.gc.ca).

Deliverables: We aim to obtain data complementary to last year results (see our report from 2012). If the results are suitable, they could lead to publication in a high-impact international journal. In any case, we will be able to deliver a report by the end of the year, and, if required, a preliminary report can be delivered before.

Burn conditions: The best plot and fire would be one with a very high fuel load and covering an area big enough to allow a severe fire (perhaps >15,000 kW/m).

Ray Ault showed us at the end of last year's campaign a potential plot to achieve this goal, which may be burned this summer. The 'cabin plot' may also be promising due to its high ground fuel load.

Site preparation: None other than our site survey and fuel inventory, sampling and instrumentation described above (ideally 1-2 preparation before the actual burn). A forest floor fuel inventory has already been carried out for the 'cabin plot' in 2012.
Resources required for burning: (None; see above)

Map of plot treatment N.A.

Ignition plan Map N.A. (see above)

Appendix B - Annual target dates

DATE:	Activity	WHO
Year round	Search out other groups looking to do research	• Project Manager
Fall	attend FPInnovations fall AGM • secure drafts of upcoming seasons projects • remind group of deadlines/formats/ requirements	• Project Manager
Feb 15	Contact other agencies about attendees (Alta, Sask, BC…)	• Project Manager
Feb-30	Review Land Use Permit # MV20092X0005. • Expiry date: April 29 2014) • Reapplication to be done Sept 2013	• Project Manager
Feb-30	Draft plan out to players for comments	• Project Manager
March 01	Contact FPInnovations re CA	• Project manager
March	Attend Spring FPInnovations mtgs • get finals of work plans • present draft ops plan • Review resource list	• Project Manager
March	Contact all participants to get copies of project work plans and updates	• Project Manager
Apr-30	Obtain a Permit to Burn from South Slave Region	• Project Manager • South Slave Manager of Forests
Apr 30	Contact Radio Techs re portable rptr/sat connection.....	• Project Manager
April/mid May	Meet with South Slave Manager of Forests to discuss coming projects Review Ops Plan Discuss and arrange for: • Crews (1 for set up, 2 for burn days) • heli • use of wildlife shack • First Aid • Quad(s) • Radio Op (at Fort Providence Base) during burns	• Project Manager • South Slave Manager of Forests

Late April / Mid May	Discuss and arrange for equipment and transport to site (Appendix D)	• Project Manager • HQ Stores • Regional Stores/staff
Apr-30	Review VARs	• Project Manager • GIS Analyst • South Slave Manager of Forests
May	Install Wx station onsite	• Project Manager • Telecomm Techs
May-25	Info/briefing to ENR Manager, Public Affairs and Communication	• Project Manager
May 25	Arrange for vehicle	• Project Manager • Equipment maintenance Co-ord.
May-30	Final OPs plan out to participants (sooner if possible)	• Project Manager
May-30	Arrange for additional staff	• Project Manager • South Slave Manager of Forests • Manager Forest Science
Jun-01	Confirm resources (tables and dates in Plan) ready to go week of June 13th and 18th as required.	• Project Manager
June-10	Put in CIFFC request for OOP attendees	• Project Manager
Jun-14	Media notification	• Manager, Public Affairs and Communication
Jun-15	• Contact the Inspector and Mackenzie Valley Land and Water Board • Contact Wx contractor about Spot forecasts	• Project Manager
Jun 15	Brief TDO & SS RDO on project	• Project Manager
Jun 20 +/-	Arrival at site and start of session	• All
End of research session	• Contact the Inspector and Mackenzie Valley Land and Water Board • briefing to ENR Manager, Public Affairs and Communication • contact South Slave manager of Forests to ensure all kit returned, briefing etc.	• Project Manager
July/September	review of project, fine tune etc.	• Project Manager
September	Remove WX Stn from Site	• Project Manager • Telecomm Techs

Appendix C - Typical daily schedule

0730		Breakfast
0745	Proj Mgr.	Collect Spot forecast from Snowshoe front desk if faxed
0800	Proj Mgr., researchers	Morning briefing
0830	Researchers	Leave Ft Providence for site
0830	Proj Mgr.	Depart for Ft Providence fire base
0830 – 1300	Researchers, crews	Site preparation for day's activities
0900	Proj Mgr.	Update South Slave Region Duty Officer on day's activities Update Ft Providence Base staff on day's activities
0930	Crews	Depart for site
1000	Proj Mgr.	Daily report faxed to principal collaborators
1030	Proj Mgr. & others as needed	Daily WX briefing @ fire base
1230	Proj Mgr.	Leave Ft Providence for site
1300	Researchers	Collection of onsite WX readings
1330	Proj Mgr./IC, ALL	Briefing on activities for day
1330 – 1730	All	Burns &/or preparation, other research
1730	Crews	Suppression/mop-up
1800	Proj Mgr.	Return to town and contact WX contractor: • Request Spot forecast for next day • Relay Wx obs for current day • Relay WX stn data
1900	All but crews	Return to town
1900- ?	Crews	Continue suppression/mop-up (Usually completed before this time) Crews report in to FT Providence Fire base dispatch when done.
1930 - 2100	All but crews	Supper and evening review/planning
2100	Proj Mgr.	Prepare daily report for next day

BOLD times are set and cannot be changed.

Appendix D - Resource requirements for research burns

This is a basic list and may be augmented at the spring planning meeting.
This is only the equipment supplied by ENR. Researchers will have separate equipment needs and it is their responsibility to arrange for its procurement and transport to the site and security.

FIRE EQUIPMENT

Via: South Slave Manager of Forests **Deliver to JP week of June 18**

#	Description	Source	Remarks
1	Trailer (region) or cube van(HQ)	Region or HQ	To tspt equipment
15	Bags of Hose (60 lengths)	Regional stores	
2	2500 portatanks	HQ Store	
2	1500 Portatanks	HQ Stores	
4	Pump kits complete	HQ Store	
15	Backpack pumps	Regional stores	
6	Drip torches	HQ Stores	
2	10 x 10 tarps	Regional stores	
as needed	Drip torch fuel	FPInnovations	Picked up daily as required
as needed	Unmixed gas	FPInnovations	Picked up daily as required
1	Ranger tent	Regional stores	
4	25L Jerry cans	HQ Stores	empty
1	"Trash" pump kit "complete"	HQ Stores	
3	Sprinkler kit	HQ Stores	
1	Spill kit	HQ Store	
1 case ea.	flagging	Regional stores	Yellow, Orange
4 cases	Chain oil	Regional stores	Deliver to JP week of June 18
2	Chainsaw kits	HQ Store	
6 cans	Tree paint, Orange	HQ Store	Paint/refresh plot corners
6 Cans	Tree paint, Pink	HQ Store	Paint/refresh plot corners
1 case	Bug dope	HQ Store	
1 case	Mix oil	HQ Store	

OFFICE & COMMUNICATIONS EQUIPMENT

Via: Project Manager **Ready for transport June 13**

#	Description	Source	Remarks
6	Hand-held radios	Communications Group	w/keypads, batteries
1	Satellite data/fax system	Communications Group	If available as required
1	Portable rptr	Communications Group	If available as required
1	Satellite phone	Communications Group	
1	Printer complete	Territorial stores	Also a printer available at Prov base
1	laptop	FMB	Copy of Behave
500	Paper	Territorial stores	

TRANSPORTATION

Ready June 18

#	Description	Source	Remarks
1	4X4 pickup	FMD, Fort Smith	***Via Project Manager***
2	4x4 "quads" c/w trailers	South Slave region	***Via South Slave Manager of Forests***

AIRCRAFT

Based on past experience, one light or intermediate helicopter will meet the operational requirements of the project. In addition to providing rotary wing support the machine may be required to move equipment and supplies. Aircraft will be arranged by the Project Manager via the South Slave Duty Officer. As much notice as possible is required.

WILDLIFE SHACK/LAB SPACE

The ENR "wildlife shack" may be requested for use by researchers to temporarily store equipment and operate drying ovens for fuel moisture sampling. The request must be made through the project manager as early as possible.

HUMAN RESOURCES

Radio Operator

A radio operator will be on duty at the Fort Providence Base Station during the period June 15 to the conclusion of the field season. This requirement is essential on days when burns are planned.
The Wildfire crews will check in with the Radio Operator at the end of their day.

Wildfire Crews

Evergreen Forest Management Limited has a contract with the Forest Management Division to provide basic forest management services. 5 person Crews are based at the Fort Providence Fire Base. One supervisor and these crews (or others designated by South Slave Manager of Forests/Duty Officer) will be used to develop the Project site and assist with the experimental prescribed burns.

Generally, one crew for set up and two crews minimum for burns.

Heavy equipment

Any heavy equipment needs will be arranged by the Project Manager in consultation with the South Slave Manager of Forests/Duty Officer

Community Projects Coordinator

A person will be assigned from the Fort Providence Base to act in this capacity as and when required by the Project Manager in consultation with the South Slave Manager of Forests.

Telecomm Technician

The Project Manager will arrange for a Telecomm Technician to set up and remove the Wx station and any other communications needs.

CBCFS PHONE NUMBERS

Fort Providence Base.....867-699-3014/3029

South Slave Duty Officer.....867-872-6422(p) / 0541(c)

Project Manager Sat Phone.....8816-514-97949

FPInnovations Sat Phone....._____

Snowshoe Inn.....867-699-3511

Territorial Duty Officer.....867-872-7711/10

North Slave Duty Officer.....867-920-6115

Frank Channel Base.....867-371-3133(p) 5001(f)

FMD HQ.....867-872-7700

SPILL REPORTING:…… 867- 920-8120

Territorial Archaeologist…….. 867-873-7688

Mackenzie Valley Land and Water Board ……867- 669-0506